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#### Gases

- Fourfold clusters of rovibrational energies in  $\text{H}_2\text{Te}$  studied with an ab initio potential energy function, P. Jensen, Y. Li, G. Hirsch, R.J. Buenker, T.J. Lee and I.N. Kozin 190 (1995) 179
- The  $3\nu_1 + \nu_3$  vibrational overtone spectrum of  $^{13}\text{CH}_4$ , K. Boraas and J.P. Reilly 190 (1995) 301
- Direct observation of weak state mixing in highly vibrationally excited acetylene, A.L. Utz, E. Carrasquillo M., J.D. Tobiasson and F.F. Crim 190 (1995) 311

#### Supersonic beams

- Jet cooled  $\text{NO}_2$  intra cavity laser absorption spectroscopy (ICLAS) between 11200 and 16150  $\text{cm}^{-1}$ , R. Georges, A. Delon, F. Bylicki, R. Jost, A. Campargue, A. Charvat, M. Chenevier and F. Stoeckel 190 (1995) 207

#### Liquids neat

- Structure and dynamics of liquid formamide, Y.P. Puhovski and B.M. Rode 190 (1995) 61

#### Liquids mixtures and solutions

- Examination of the viability of the Collins–Kimball model and numerical calculation of the time-dependent energy gap law of photoinduced charge separation in polar solution, N. Matsuda, T. Kakitani, T. Denda and N. Mataga 190 (1995) 83
- Overtone spectroscopy of isobutane at cryogenic temperatures, C. Manzanares I., J. Peng, N. Mina-Camilde and A. Brock 190 (1995) 247

#### Polymers

- An assessment of the role of polaron formation to hole transport in a triarylamine doped polymer, M. Van der Auweraer, G. Verbeek, F.C. De Schryver and P.M. Borsenberger 190 (1995) 31

#### Biological systems

- Theory of second harmonic generation in randomly oriented species, D.L. Andrews, P. Allcock and A.A. Demidov 190 (1995) 1

### Microscopic systems

#### Molecules (neutral and ionic)

##### -diatomic

- Response theory calculations of singlet–triplet transitions in molecular nitrogen, B. Minaev, P. Norman, D. Jonsson and H. Ågren 190 (1995) 11
- A theoretical study of the transition moments, Einstein  $A$  coefficients, and radiative lifetimes of the lowest triplet states of  $\text{BeC}$ , A.C. Borin and F.R. Ornellas 190 (1995) 43
- A theoretical reinvestigation of the  $\tilde{A} \ ^1\Pi_u$  state of  $\text{N}_2^+$ , F.R. Bennett 190 (1995) 53

##### -small polyatomics

- Laser excitation and dispersed fluorescence investigations of the  $\tilde{A} \ ^2\Pi-\tilde{X} \ ^2\Sigma^+$  system of  $\text{SrOH}$ , P.I. Presunka and J.A. Coxon 190 (1995) 97

- Chemiluminescence quasi-continua in collisions of Ca(<sup>1</sup>S), Sr(<sup>1</sup>S) and Mg\*(<sup>3</sup>P) atoms with I<sub>2</sub>, P. Kierzkowski, R. Ławruszczuk and A. Kowalski 190 (1995) 131
- Dimethylacetylene: the theory required to analyse the infrared and Raman perpendicular bands, P.R. Bunker and C. Di Lauro 190 (1995) 159
- Sensitive photoacoustic overtone spectroscopy of acetylene with a multipass photoacoustic cell and a colour centre laser at 1.5 μm, Ch. Hornberger, M. König, S.B. Rai and W. Demtröder 190 (1995) 171
- Fourfold clusters of rovibrational energies in H<sub>2</sub>Te studied with an ab initio potential energy function, P. Jensen, Y. Li, G. Hirsch, R.J. Buenker, T.J. Lee and I.N. Kozin 190 (1995) 179
- Jet cooled NO<sub>2</sub> intra cavity laser absorption spectroscopy (ICLAS) between 11200 and 16150 cm, R. Georges, A. Delon, F. Bylicki, R. Jost, A. Campargue, A. Charvat, M. Chenevier and F. Stoeckel 190 (1995) 207
- Collision-induced state-to-state energy transfer in perturbed rovibrational manifolds of small polyatomic molecules: mechanistic insights and observations, B.J. Orr 190 (1995) 261
- Vibration-rotation spectra of <sup>13</sup>C containing acetylene: anharmonic resonances, E. Venuti, G. Di Lonardo, P. Ferracuti, L. Fusina and I.M. Mills 190 (1995) 279
- The vibration-rotation spectrum and anharmonic potential of H<sub>3</sub><sup>+</sup>, J.K.G. Watson 190 (1995) 291
- The 3ν<sub>1</sub> + ν<sub>3</sub> vibrational overtone spectrum of <sup>13</sup>CH<sub>4</sub>, K. Boraas and J.P. Reilly 190 (1995) 301
- Direct observation of weak state mixing in highly vibrationally excited acetylene, A.L. Utz, E. Carrasquillo M., J.D. Tobiasson and F.F. Crim 190 (1995) 311
- An improved anharmonic force field of CHClF<sub>2</sub>, P. Palmieri, R. Tarroni, M.M. Hühn, N.C. Handy and A. Willetts 190 (1995) 327
- Ab initio calculations of stretching vibrational transitions for the linear molecules HCN, HNC, HCCF and HC<sub>3</sub>N up to high overtones, P. Botschwina, B. Schulz, M. Horn and M. Matuschewski 190 (1995) 345
- Overtone spectra and anharmonic resonances in haloacetylenes, A.F. Borro, I.M. Mills and A. Mose 190 (1995) 363
- Short time quantum phase space dynamics at a 1:2 Fermi resonance, M.S. Child, G. Bruun and R. Paul 190 (1995) 373
- Simplified models for anharmonic numbers and densities of vibrational states. I. Application to NO<sub>2</sub> and H<sub>3</sub><sup>+</sup>, J. Troe 190 (1995) 381
- The intramolecular dynamics of allene in the region around 6000 cm<sup>-1</sup> via eigenstate resolved IR spectroscopy, J.H. Timmermans, K.K. Lehmann and G. Scoles 190 (1995) 393
- aromatics*
- High resolution spectroscopic study of the first overtone of the N-H stretch and of the fundamentals of the C-H stretches in pyrrole, A. Held and M. Herman 190 (1995) 407
- Overtone spectroscopy and dynamics in monodeuteroacetylene (C<sub>2</sub>HD), J. Liévin, M. Abbouti Temsamani, P. Gaspard and M. Herman 190 (1995) 419
- Molecular aggregates*
- Theory of second harmonic generation in randomly oriented species, D.L. Andrews, P. Allcock and A.A. Demidov 190 (1995) 1
- Free radicals (including hydronium and muonium)*
- Lack of ionic strength effect in the recombination of hydrated electrons: (e<sup>-</sup>)<sub>aq</sub> + (e<sup>-</sup>)<sub>aq</sub> → 2(OH<sup>-</sup>) + H<sub>2</sub>, K.H. Schmidt and D.M. Bartels 190 (1995) 145

*Ions and charge carriers*

- Charge inversion of ground-state and metastable-state  $C_2^+$  cations formed from electroionised  $C_2H_2$  and  $C_2N_2$ , and a re-evaluation of the carbon dimer's ionisation energy, C.J. Reid, J.A. Ballantine, S.R. Andrews and F.M. Harris 190 (1995) 113
- Laser photodissociation of fluorinated molecular dications, S.D. Price, Y.-Y. Lee, M. Manning and S.R. Leone 190 (1995) 123
- Lack of ionic strength effect in the recombination of hydrated electrons:  $(e^-)_{aq} + (e^-)_{aq} \rightarrow 2(OH^-) + H_2$ , K.H. Schmidt and D.M. Bartels 190 (1995) 145

**Phenomena***Molecular structure*

- An improved anharmonic force field of  $CHClF_2$ , P. Palmieri, R. Tarroni, M.M. Hühn, N.C. Handy and A. Willetts 190 (1995) 327

*Vibrations and rotations of molecules*

- Laser excitation and dispersed fluorescence investigations of the  $\tilde{A}^2\Pi-\tilde{X}^2\Sigma^+$  system of  $SrOH$ , P.I. Presunka and J.A. Coxon 190 (1995) 97
- Dimethylacetylene: the theory required to analyse the infrared and Raman perpendicular bands, P.R. Bunker and C. Di Lauro 190 (1995) 159
- Sensitive photoacoustic overtone spectroscopy of acetylene with a multipass photoacoustic cell and a colour centre laser at  $1.5 \mu m$ , Ch. Hornberger, M. König, S.B. Rai and W. Demtröder 190 (1995) 171
- Fourfold clusters of rovibrational energies in  $H_2Te$  studied with an ab initio potential energy function, P. Jensen, Y. Li, G. Hirsch, R.J. Buenker, T.J. Lee and I.N. Kozin 190 (1995) 179
- Intramolecular vibrational dynamics of diacetylene and diacetylene- $d_1$  via eigenstate-resolved overtone spectroscopy, J.E. Gambogi, R. Zachary Pearson, X. Yang, K.K. Lehmann and G. Scoles 190 (1995) 191
- High-order torsional couplings in the infrared spectrum of 3,3,3-trifluoropropene, A. Ainetshian, G.T. Fraser, B.H. Pate and R.D. Suenram 190 (1995) 231
- Overtone spectroscopy of isobutane at cryogenic temperatures, C. Manzanares I., J. Peng, N. Mina-Camilde and A. Brock 190 (1995) 247
- Collision-induced state-to-state energy transfer in perturbed rovibrational manifolds of small polyatomic molecules: mechanistic insights and observations, B.J. Orr 190 (1995) 261
- Vibration-rotation spectra of  $^{13}C$  containing acetylene: anharmonic resonances, E. Venuti, G. Di Lonardo, P. Ferracuti, L. Fusina and I.M. Mills 190 (1995) 279
- The vibration-rotation spectrum and anharmonic potential of  $H_3^+$ , J.K.G. Watson 190 (1995) 291
- The  $3\nu_1 + \nu_3$  vibrational overtone spectrum of  $^{13}CH_4$ , K. Boraas and J.P. Reilly 190 (1995) 301
- Direct observation of weak state mixing in highly vibrationally excited acetylene, A.L. Utz, E. Carrasquillo M., J.D. Tobiason and F.F. Crim 190 (1995) 311
- An improved anharmonic force field of  $CHClF_2$ , P. Palmieri, R. Tarroni, M.M. Hühn, N.C. Handy and A. Willetts 190 (1995) 327
- Ab initio calculations of stretching vibrational transitions for the linear molecules HCN, HNC, HCCF and  $HC_3N$  up to high overtones, P. Botschwina, B. Schulz, M. Horn and M. Matuschewski 190 (1995) 345

- Overtone spectra and anharmonic resonances in haloacetylenes, A.F. Borro, I.M. Mills and A. Mose 190 (1995) 363
- High resolution spectroscopic study of the first overtone of the N-H stretch and of the fundamentals of the C-H stretches in pyrrole, A. Held and M. Herman 190 (1995) 407
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- Response theory calculations of singlet-triplet transitions in molecular nitrogen, B. Minaev, P. Norman, D. Jonsson and H. Ågren 190 (1995) 11
- A theoretical study of the transition moments, Einstein *A* coefficients, and radiative lifetimes of the lowest triplet states of BeC, A.C. Borin and F.R. Ornellas 190 (1995) 43
- A theoretical reinvestigation of the  $\tilde{A}^1\Pi_u$  state of  $N_2^+$ , F.R. Bennett 190 (1995) 53
- Laser excitation and dispersed fluorescence investigations of the  $\tilde{A}^2\Pi-\tilde{X}^2\Sigma^+$  system of SrOH, P.I. Presunka and J.A. Coxon 190 (1995) 97
- Charge inversion of ground-state and metastable-state  $C_2^+$  cations formed from electroionised  $C_2H_2$  and  $C_2N_2$ , and a re-evaluation of the carbon dimer's ionisation energy, C.J. Reid, J.A. Ballantine, S.R. Andrews and F.M. Harris 190 (1995) 113
- Electric and magnetic properties*
- Ab initio calculations of stretching vibrational transitions for the linear molecules HCN, HNC, HCCF and  $HC_3N$  up to high overtones, P. Botschwina, B. Schulz, M. Horn and M. Matuschewski 190 (1995) 345
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- High resolution spectroscopic study of the first overtone of the N-H stretch and of the fundamentals of the C-H stretches in pyrrole, A. Held and M. Herman 190 (1995) 407
- Overtone spectroscopy and dynamics in monodeuteroacetylene ( $C_2HD$ ), J. Liévin, M. Abbouti Temsamani, P. Gaspard and M. Herman 190 (1995) 419
- Coupling of electronic and nuclear motion*
- Jet cooled  $NO_2$  intra cavity laser absorption spectroscopy (ICLAS) between 11200 and 16150 cm, R. Georges, A. Delon, F. Bylicki, R. Jost, A. Campargue, A. Charvat, M. Chenevier and F. Stoeckel 190 (1995) 207
- Energy transfer processes*
- Collision-induced state-to-state energy transfer in perturbed rovibrational manifolds of small polyatomic molecules: mechanistic insights and observations, B.J. Orr 190 (1995) 261
- Molecular photophysical processes*
- Laser photodissociation of fluorinated molecular dications, S.D. Price, Y.-Y. Lee, M. Manning and S.R. Leone 190 (1995) 123
- Simplified models for anharmonic numbers and densities of vibrational states. I. Application to  $NO_2$  and  $H_3^+$ , J. Troe 190 (1995) 381
- Intramolecular dynamics*
- Short time quantum phase space dynamics at a 1:2 Fermi resonance, M.S. Child, G. Bruun and R. Paul 190 (1995) 373
- High resolution spectroscopic study of the first overtone of the N-H stretch and of the fundamentals of the C-H stretches in pyrrole, A. Held and M. Herman 190 (1995) 407

*-vibrational energy redistribution (including vibrational dissociation)*

- High-order torsional couplings in the infrared spectrum of 3,3,3-trifluoropropene,  
A. Ainetschian, G.T. Fraser, B.H. Pate and R.D. Suenram 190 (1995) 231
- Direct observation of weak state mixing in highly vibrationally excited acetylene, A.L. Utz,  
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- The intramolecular dynamics of allene in the region around 6000 cm<sup>-1</sup> via eigenstate  
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- Overtone spectroscopy and dynamics in monodeuteroacetylene (C<sub>2</sub>HD), J. Liévin,  
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*Luminescence spectra, yields and lifetimes*

- Response theory calculations of singlet-triplet transitions in molecular nitrogen, B. Minaev,  
P. Norman, D. Jonsson and H. Ågren 190 (1995) 11
- A theoretical study of the transition moments, Einstein *A* coefficients, and radiative lifetimes  
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*Multiphoton phenomena*

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P. Allcock and A.A. Demidov 190 (1995) 1

*Reactions (including dissociation)**-gas phase*

- Laser photodissociation of fluorinated molecular dications, S.D. Price, Y.-Y. Lee,  
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- Chemiluminescence quasi-continua in collisions of Ca(<sup>1</sup>S), Sr(<sup>1</sup>S) and Mg\*(<sup>3</sup>P) atoms  
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*-condensed phase*

- Lack of ionic strength effect in the recombination of hydrated electrons:  
(e<sup>-</sup>)<sub>aq</sub> + (e<sup>-</sup>)<sub>aq</sub> → 2(OH<sup>-</sup>) + H<sub>2</sub>, K.H. Schmidt and D.M. Bartels 190 (1995) 145

*Tunneling*

- A theoretical reinvestigation of the  $\tilde{A} \ ^1\Pi_u$  state of N<sub>2</sub><sup>2+</sup>, F.R. Bennett 190 (1995) 53

*Electron transfer*

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